In the Claims:

1.   (Currently amended) A storage apparatus comprising:

a gateway, having a processor, a memory, and at least one port operative to connect to an external network;

~~at least one of~~ a plurality of devices that store information, each of said devices further comprising at least one volume ~~of a plurality of volumes~~;

a server;

a switch; and

an internal network connecting said gateway, said server, said switch, and ~~said~~ at least one of ~~a plurality~~ said plurality of devices that store information; wherein

said gateway receives a data packet for storing, retrieves a virtual destination address from said data packet, ~~and thereupon~~ searches in said memory for ~~a virtual~~ said virtual destination address retrieved from said data packet, ~~and thereupon~~ reads from said memory a corresponding destination address for a particular one of said ~~at least one of a~~ plurality of devices that store information, and thereupon replaces in said data packet said virtual destination address with said corresponding destination address from said memory; and wherein

said gateway searches in said data packet for a virtual private volume identifier, and if found, thereupon searches in said memory for a volume identifier corresponding to said virtual private volume identifier, and thereupon replaces said virtual private volume identifier in said data packet with said volume identifier.

2.   (Original) The apparatus of claim 1, wherein said gateway authenticates a source of said data packet based upon a user address in said data packet.

3.   (Original) The apparatus of claim 1, wherein said external network comprises a virtual private network (VPN), and wherein said gateway performs VPN processing for said data packet.

4.   (Original) The apparatus of claim 1, wherein said external network uses a first protocol and said internal network uses a second protocol, and wherein said gateway translates said data packet from said first protocol to said second protocol.

5.   (Original) The apparatus of claim 4, wherein said first protocol comprises at least one of IP protocol, ATM, and Fibre channel.

6.   (Original) The apparatus of claim 4, wherein said second protocol comprises at least one of IP protocol, ATM, and Fibre channel.

7.   (Canceled)

8.   (Original) The apparatus of claim 1, wherein said gateway receives a data packet being sent to said external network, and thereupon searches in said memory for a destination address retrieved from said data packet, and thereupon reads from said memory a corresponding virtual destination address from said memory, and thereupon replaces in said data packet said destination address with said corresponding virtual destination address from said memory.

9.   (Original) The apparatus of claim 1, wherein said virtual destination address and said destination address are stored in a table.

10.   (Currently amended) A storage apparatus comprising:
a server, having a processor, a memory, and at least one port operative to connect to an external network;
at least one of a plurality of devices that store information, each of said devices further comprising at least one volume of a plurality of volumes;
a switch; and
an internal network connecting said server, said switch, and said at least one of said plurality a plurality of devices that store information; wherein

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said server receives a data packet for storing, <u>retrieves a virtual destination</u> <u>address from said data packet,</u> and thereupon searches in said memory for <u>said virtual</u> a virtual destination address retrieved from said data packet, and thereupon reads from said memory a corresponding destination address for a particular one of said at least one of a plurality of devices that store information, and thereupon replaces in said data packet said virtual destination address with said corresponding destination address from said memory; and wherein

<u>said server searches in said data packet for a virtual private volume identifier, and</u> <u>if found, thereupon searches in said memory for a volume identifier corresponding to said virtual</u> <u>private volume identifier, and thereupon replaces said virtual private volume identifier in said</u> <u>data packet with said volume identifier.</u>

11. (Original) The apparatus of claim 10, further comprising a gateway, said gateway having a processor, a memory, and at least one port operative to connect to an external network, and wherein said external network uses a first protocol and said internal network uses a second protocol, and wherein said gateway translates said data packet from said first protocol to said second protocol.

12. (Original) The apparatus of claim 11, wherein said first protocol comprises at least one of IP protocol, ATM, and Fibre channel.

13. (Original) The apparatus of claim 11, wherein said second protocol comprises at least one of IP protocol, ATM, and Fibre channel.

14. (Original) The apparatus of claim 11, wherein said external network comprises a virtual private network (VPN), and wherein said gateway performs VPN processing for said data packet.

15. (Canceled)

16.   (Original) The apparatus of claim 10, wherein said server receives a data packet being sent to said external network, and thereupon searches in said memory for a destination address retrieved from said data packet, and thereupon reads from said memory a corresponding virtual destination address from said memory, and thereupon replaces in said data packet said destination address with said corresponding virtual destination address from said memory.

17.   (Original) The apparatus of claim 10, wherein said server authenticates a source of said data packet based upon a user address in said data packet.

18.   (Currently amended) A storage apparatus comprising:

a switch, having a processor, a memory, and at least one port operative to connect to an external network;

at least one of a plurality of devices that store information, each of said devices further comprising at least one volume of a plurality of volumes;

a server; and

an internal network connecting said server, said switch, and said at least one of said plurality a plurality of devices that store information; wherein

said switch receives a data packet for storing, retrieves a virtual destination address from said data packet, and thereupon searches in said memory for said virtual a virtual destination address retrieved from said data packet, and thereupon reads from said memory a corresponding destination address for a particular one of said at least one of a plurality of devices that store information, and thereupon replaces in said data packet said virtual destination address with said corresponding destination address from said memory; and wherein

said switch searches in said data packet for a command and a virtual private volume identifier, and if found, thereupon searches in said memory for a volume identifier corresponding to said virtual private volume identifier, and thereupon replaces said virtual private volume identifier in said data packet with said volume identifier.

19.   (Original) The apparatus of claim 18, further comprising a gateway, said gateway having a processor, a memory, and at least one port operative to connect to an external network, and wherein said external network uses a first protocol and said internal network uses a second protocol, and wherein said gateway translates said data packet from said first protocol to said second protocol.

20.   (Original) The apparatus of claim 19, wherein said first protocol comprises at least one of IP protocol, ATM, and Fibre channel.

21.   (Original) The apparatus of claim 19, wherein said second protocol comprises at least one of IP protocol, ATM, and Fibre channel.

22.   (Original) The apparatus of claim 19, wherein said external network comprises a virtual private network (VPN), and wherein said gateway performs VPN processing for said data packet.

23.   (Canceled)

24.   (Original) The apparatus of claim 18, wherein said switch receives a data packet being sent to said external network, and thereupon searches in said memory for a destination address retrieved from said data packet, and thereupon reads from said memory a corresponding virtual destination address from said memory, and thereupon replaces in said data packet said destination address with said corresponding virtual destination address from said memory.

25.   (Original) The apparatus of claim 18, wherein said switch authenticates a source of said data packet based upon a user address in said data packet.

26.   (Currently amended) A storage apparatus comprising:

at least one of a plurality of devices that store information, each of said devices further comprising at least one volume of a plurality of volumes, a processor, a memory, and at least one port operative to connect to an external network;

a switch;

a server; and

an internal network connecting said server, said switch, and said at least one of said plurality a plurality of devices that store information; wherein

said at least one of said plurality a plurality of devices that store information receives a data packet for storing, retrieves a virtual destination address from said packet, and thereupon searches in said memory for said virtual a virtual destination address retrieved from said data packet, and thereupon reads from said memory a corresponding destination address for a particular one of said at least one of a plurality of devices that store information, and thereupon replaces in said data packet said virtual destination address with said corresponding destination address from said memory; and wherein

said particular one of said plurality of devices that store information searches in said data packet for virtual private volume identifier, and if found, thereupon searches in said memory for a volume identifier corresponding to said virtual private volume identifier, and thereupon replaces said virtual private volume identifier in said data packet with said volume identifier.

27. (Original) The apparatus of claim 26, further comprising a gateway, said gateway having a processor, a memory, and at least one port operative to connect to an external network, and wherein said external network uses a first protocol and said internal network uses a second protocol, and wherein said gateway translates said data packet from said first protocol to said second protocol.

28. (Original) The apparatus of claim 27, wherein said first protocol comprises at least one of IP protocol, ATM, and Fibre channel.

29.   (Original) The apparatus of claim 27, wherein said second protocol comprises at least one of IP protocol, ATM, and Fibre channel.

30.   (Original) The apparatus of claim 27, wherein said external network comprises a virtual private network (VPN), and wherein said gateway performs VPN processing for said data packet.

31.   (Canceled)

32.   (Currently amended) The apparatus of claim 26, wherein ~~said~~ at least one of said plurality ~~a plurality~~ of devices that store information receives a data packet being sent to said external network, and thereupon searches in said memory for a destination address retrieved from said data packet, and thereupon reads from said memory a corresponding virtual destination address from said memory, and thereupon replaces in said data packet said destination address with said corresponding virtual destination address from said memory.

33.   (Currently amended) The apparatus of claim 26, wherein said at least one of said plurality ~~a plurality~~ of devices that store information authenticates a source of said data packet based upon a user address in said data packet

34.   (Original) A method for managing storage, comprising:
receiving a data packet;
retrieving a virtual destination address from said data packet;
searching for the virtual ~~a virtual~~ destination address retrieved from said data packet;
reading a corresponding destination address for a particular one of ~~at least one of~~ a plurality of devices that store information; ~~and~~
replacing in said data packet said virtual destination address with said corresponding destination ~~address~~ address;
retrieving a virtual private volume identifier from said data packet;

searching for the virtual private volume identifier retrieved from said data packet;

reading a corresponding private volume identifier of a volume in one of said plurality of devices that store information; and

replacing in said data packet said virtual private volume identifier with said corresponding private volume identifier.